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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,120	03/27/2001	Stepan Sokolov	SUN1P811/P5512	4323
22434	7590	12/16/2005	EXAMINER	
BEYER WEAVER & THOMAS LLP			SHAH, NILESH R	
P.O. BOX 70250			ART UNIT	
OAKLAND, CA 94612-0250			PAPER NUMBER	

2195

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,120

Applicant(s)

SOKOLOV ET AL

Examiner

Nilesh Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,10,13,16,18 and 21-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-5,7,10,13,16 and 18 is/are allowed.
- 6) ☐ Claim(s) 21-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/24/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1,3,4,5,7,10,13,16,18 and 21-31 are presented for examination.

Allowable Subject Matter

2. Claims 1,3,4,5,7,10,13,16,18 are allowed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 21-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Cartwright (6,075,942).
4. As per claim 21, Cartwright teaches a computer readable medium including computer program code for storing a reduced-set of virtual machine instructions suitable for execution by a virtual machine, wherein the reduced-set of virtual machine instructions (col. 4 lines 4 lines 5-15; col. 4 lines 46-65; col. 9 lines 37-55; col. 12 lines 25-65). includes a first plurality of virtual machine instructions that collectively represent a complete-set of virtual machine instructions which can be used to implement said virtual

machine(col. 13 lines 1-15), wherein said virtual machine may also be implemented by a larger-set of virtual machine instructions including a second plurality of virtual machine instructions that collectively represent another complete-set of virtual machine instructions which also can be used to implement said virtual machine(col. 1 lines 45-52; col. 2 lines 20-45), wherein the number of virtual machine instructions in said first plurality of virtual machines instructions of said reduced-set is less than the number of instructions in said second plurality of virtual machines instructions in said larger-set (col. 12 lines 25-30; col. 12 lines 35-40).

5. As per claim 22, Cartwright teaches a computer readable medium wherein said reduced-set includes at least one virtual machine instruction which implements a functionality which is not provided by any of the virtual machine instructions in said larger-set (col. 12 lines 35-40; col. 1 lines 45-52; col. 2 lines 20-45).
6. As per claim 23, Cartwright teaches a computer readable medium wherein said reduced-set includes a push, a load, a store, a dup, a return, and a new instruction.(fig. 3; fig. 5; col. 2 lines 63-67; col. 3 lines 19-35).
7. As per claim 24, Cartwright teaches a computer readable medium wherein said virtual machine includes a code stream and a data stream, and wherein the code stream is designated for storing the code associated with virtual machine instructions in said reduced-set of virtual machines instructions and the data stream is designated for storing

the code associated with virtual machine instructions in said reduced-set of virtual machines instructions (Fig. 10; col. 2 lines 34-62; col. 11 lines 1-20; col. 12 lines 35-40).

8. Claims 25-26 are rejected based on the same rejection as claims 21 and 26 above.
9. As per claim 27, Cartwright teaches virtual machine embodied in a computer readable media, the virtual machine being compatible with a defined virtual machine specification that includes a defined set of executable virtual machine instructions that must be implemented to conform with the virtual machine specification (col. 4 lines 4 lines 5-15; col. 4 lines 46-65; col. 9 lines 37-55; col. 12 lines 25-65; col. 13 lines 1-15), the virtual machine being arranged to execute a reduced set of virtual machine instructions that provide substantially all of the functionality provided by the defined virtual machine instruction set(col. 1 lines 45-52; col. 2 lines 20-45), and wherein every one of the instructions in the defined set of executable instructions can be represented by at least one of the virtual machine instructions in the reduced virtual machine instruction set(col. 12 lines 35-40), and wherein the reduced set of virtual machine instructions consists of a number of virtual machine instructions which is less than the number executable virtual machine instructions in the defined virtual machine instruction set (col. 12 lines 25-30; col. 12 lines 35-40).
10. Claim 28 is rejected based on the same rejection as claim 23 above.

11. As per claim 29, Cartwright teaches virtual machine, wherein said reduced-set of virtual machine instructions includes at least one virtual machine instruction that represents at least one operation that cannot be represented by any one of the Java Bytecode executable instructions (col. 2 lines 21-35).
12. Claim 30 is rejected based on the same rejection as claim 22 above.
13. As per claim 31, Cartwright teaches a method for translating a first stream of Bytecodes that include virtual machine instructions that are compliant with a defined-set of virtual machine instructions that are defined by a virtual machine specification into a reduced set representation of Bytecodes (col. 2 lines 21-35; col. 4 lines 4 lines 5-15; col. 4 lines 46-65; col. 9 lines 37-55; col. 12 lines 25-65) that include only virtual machine instructions that are part of a reduced-set of virtual machine instructions, wherein the reduced-set of virtual machine instructions provide substantially all of the functionality provided by the defined virtual machine instruction set and the number of virtual machine instructions in the reduced set of virtual machine instructions is less than the number of virtual instructions in the defined set of virtual machine instructions, the method comprising (col. 12 lines 25-30; col. 12 lines 35-40): receiving a first stream of Bytecodes that include a first plurality of virtual machine instructions, wherein all of the virtual machine instructions in the first stream of Bytecodes are included in and compliant with the defined virtual machine instructions set (col. 6 lines 1-10; col. 2 lines 21-35; col. 14 lines 35-45); and translating the first plurality of virtual machine instructions into a second

plurality of virtual machine instructions, wherein all of the second plurality of virtual machine instructions are included in and compliant with the reduced virtual machine instruction set (col. 14 lines 50-67; col. 2 lines 63-67; col. 3 lines 19-35).

Response to Arguments

14. Applicant's arguments filed 9/27/05 have been fully considered but they are not persuasive. Applicant states that Cartwright does not teach the use of a reduced instruction virtual machine. However, it is clearly showed that Cartwright teaches the use of a RISC (Reduced instruction set computing) system within a virtual machine (col. 4 lines 4 lines 5-15; col. 4 lines 46-65; col. 9 lines 37-55; col. 12 lines 25-65). In addition Johnson et al teach the use of a reduced instruction set of a virtual machine.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnson et al teach the use of a reduced instruction set.
16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nilesh Shah whose telephone number is (571)272-3771. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nilesh Shah
Examiner
Art Unit 2195

NS
December 5, 2005

MENG-AN AN
SUPERVISORY PATENT EXAMINER
TECNOLOGY CENTER 2100